Arizona Labor Force and Employment for Economic Assistance Programs December 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,753,831	1,639,835	113,996	6.5%
Apache	16,208	13,351	2,857	17.6
Cochise	37,127	33,823	3,304	8.9
Coconino	44,394	39,863	4,531	10.2
Gila	13,729	11,870	1,859	13.5
Graham	9,400	8,478	922	9.8
Greenlee	3,218	2,917	301	9.4
La Paz	5,259	4,733	526	10.0
Maricopa	1,078,176	1,019,028	59,148	5.5
Mohave	33,619	31,185	2,434	7.2
Navajo	28,699	24,838	3,861	13.5
Pima	333,604	315,549	18,055	5.4
Pinal	41,476	37,785	3,691	8.9
Santa Cruz	10,868	9,524	1,344	12.4
Yavapai	38,639	35,814	2,825	7.3
Yuma	59,414	51,075	8,339	14.0

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in December

(Continued from Page 7)

The transportation component (mostly airlines) had the larger part of the gain (400). Trade added 5,300, only slightly weaker than the expansionary average (5,900). Services came in at 1,000 below the December average gain, adding only 1,100.

Tourism accounts for some of the growth that has occurred in those service-producing industries. But the tourism-related components of TCPU, Trade, and Services (transportation, restaurants and bars, and hotels) grew only 800, while 1,400 has been the average December growth since 1982.

December's Government employment lost 10,800 and was the prime component behind the total wage and salary employment loss. In years when election employment is not counted in November, usual government losses are on the order of 1,500. Most of those losses result from school holiday recesses.

Discussion of this month's over-the-year change has been intentionally avoided. All 1988 employment estimates will be revised next month, when they are benchmarked to available Unemployment Insurance reports. Research Administration will then review over-the-year change as a prelude to its employment forecasts scheduled for release February 28.

--Ron Simon

BLS Revises Method for Estimating Employment, Unemployment Rate

(Continued from Page 7)
ployment and employment. This method used monthly data from the Unemployment Insurance (UI) system and the Current Employment Statistics (CES) program covering nonagricultural payroll employment.

The unemployment estimates, because they were based on data from UI programs that differ from state to state, were not comparable. In order to ensure comparability with other states and nationally, the monthly estimates were adjusted to the CPS in a six-month moving-average relationship.

Once annual average CPS data were available, monthly employment and unemployment estimates for the year were adjusted to those benchmark numbers using a mathematical approach to distribute the difference between the CPS annual average and the average of the estimates prepared by the building-block method.

But the relatively small proportion of total unemployed accounted for by UI claimants, and difficulties in estimating groups not covered by UI, caused the building-block estimates to significantly underestimate CPS levels, particularly the number of unemployed.

The new regression models use two estimating equations for each state; one for employment and one for the unemployment rate.

The employment model uses the CES estimate of nonfarm wage and salary jobs, and data from the CPS on employed persons not included in the CES survey. The latter includes agricultural workers, and self-employed, unpaid-family, and private-household workers.

The unemployment rate model uses data on UI claimants who have no earnings from employment to represent most of the experienced unemployed. An employment-to-population ratio is also incorporated to reflect both the business cycle and the experienced unemployed not covered by the UI data.

In addition, a variable is used to represent unemployed new entrants and re-entrants to the labor force. And in some states, a seasonal-entrant factor is applied to show the labor force increase that occurs at the end of the school year.

Once the data are incorporated in the models for the month, unemployment and labor force estimates are calculated. The unemployment rate is modeled rather than the unemployment level because the rate is usually considered a more meaningful economic measure.

Although the differences between the annual average of the model estimates and the CPS are small, the model estimates will continue to be benchmarked to the CPS annual averages. However, a new benchmarking method will be used that is consistent with the model-based estimation procedure and preserves the original monthly seasonal pattern of the model estimates.

For more information on the changes made, call Research Administration's CES unit, (602) 542-3871, or the BLS in Washington D.C., (202) 523-1158.

CPI Incorrectly Labeled

The U.S. Consumer Price Index (Base = 1982-84) in the January 1989 *Arizona Labor Market Information Newsletter* was incorrectly labeled October 1988. The information given was for the month of November 1988. Following are data for both months:

	October	November
Wage Earner/Clerical Worker	118.9	119.0
% Change Year Ago	4.2	4.1
All Urban	120.2	120.3
% Change Year Ago	4.2	4.2

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - Up to 200 manufacturing and administrative jobs are expected to be eliminated through retirement and attrition at **Honeywell Bull** in Phoenix. The reduction is part of a plan to eliminate 1,600 positions in the United States. The cuts, which should take place in the first quarter of the year, are due in part to a decline in the mainframe computer market, the company said.

Northwest Airlines has contracted with **Honeywell Inc.** (a separate company from Honeywell Bull) of Phoenix to build a collision-warning system for its fleet of aircraft. No terms of the agreement were announced, but it was previously estimated it could cost up to $55 million to equip Northwest's current fleet of 309 planes, and 140 aircraft on order.

Intel Corp. intends to complete construction on a $40 million factory in Chandler, which was only 25 percent finished when work was stopped in 1985 due to a downturn in the semiconductor industry. About 900 employees will move into the facility -- which will be used for assembly and testing of semiconductors -- upon completion in November, but no additional employees are expected to be hired.

Tucson, reeling from the pullout of International Business Machines and layoffs at Hughes Aircraft Co., received some well-deserved good news. ... The relocation of **Weiser Lock Co.** from Huntington Beach, Calif., is expected to create 300 to 400 assembly and other jobs, and may generate an additional 300 to 400 jobs among local suppliers of lock components. Hiring is expected to begin in the next three to six months. ... *The Archives of Internal Medicine*, the third-largest medical journal in the United States, has moved its offices from Boston to Tucson. The American Medical Association publishes the journal, which has a circulation of 115,000. ... Tucson officials are waiting to hear on possible relocation of a California electronics company and an Italian aircraft firm. EECO, Inc. of Santa Ana, Calif., is expected to move part of its operation -- a computer-keyboard unit and support functions for a Mexico unit -- which would initially employ 65 people, but eventually could increase to 200 or more. Tucson representatives, meanwhile, are asking **Piaggio Aviation Inc.** of Italy to set up a U.S. assembly site at the former Learjet manufacturing plant at Tucson International Airport. The plant would be used to build the company's Avanti turboprop planes and could lead to the employment of 600 workers in a few years.

CONSTRUCTION - **Emerald Homes L.P.** has announced plans to build a 5,000-home retirement community in Green Valley, about 50 miles south of Tucson. The 2,000-acre community will feature mainly single-family detached units and include two 18-hole golf courses, a recreation center and commercial development. Construction is expected to begin in June or July.

Plans to build a 7,600-acre master-planned community west of Casa Grande were announced by **The Simmons Co.** of Phoenix. The project, to be known as Cimarron Ranch, will in-

(Continued on Page 15)

clude residential, industrial and commercial development. It will be located within a 38,000-acre site authorized for master planning by the Pinal County Board of Supervisors.

TRADE - A 175,000-square foot shopping center, which will feature a Wal-Mart and Walgreen's, is under construction on Mariposa Road in Nogales. All told, the **Loma Linda Shopping Center** has 12 signed leases with national chains and local merchants.

Goodyear Tire and Rubber Co. has opened a 90,000-square-foot warehouse and distribution center at 4501 W. Polk St. in Phoenix. The facility will replace warehouses in Los Angeles and El Paso, Texas.

A name synonymous with Arizona will bite the dust later this year when the five **Goldwaters** stores in Phoenix take their new name of **Robinson's**. But more important will be the loss of 400 administrative and distribution positions in the Valley. Seventy-five to 80 percent of those affected, however, will be offered other positions by May Department Stores Co., the parent company of Robinson's. May Co. also plans to expand the number of Robinson's outlets in the next few years with a $40 million investment. Two Goldwaters stores in Tucson will be sold to other chains. Many of the Tucson stores' 400 employees will be offered positions or preferential treatment for jobs at two Foley's stores in Tucson, which are owned by May Co.

Montgomery Ward & Co. will open its second Tucson store in March. To be located at 4147 N. Oracle Road, the store will have 102,000 square feet and will feature one of the largest Ward's electronics departments in the country. The store is expected to employ 165 full-time workers.

FINANCE, INSURANCE and REAL ESTATE - **MeraBank** is closing seven more of the 21 Safeway-store branches it acquired from Western Savings and Loan Association. Four of the branches are in Tucson, and one each in Flagstaff, Prescott and Yuma. Twelve of the branches were closed when the original purchase was made.

SERVICES and MISCELLANEOUS - Resumption of rail service between Williams and the Grand Canyon is part of an $85 million project expected to produce 100 jobs initially and 800 more down the tracks, in April 1990, when the **Grand Canyon Railway** begins service. In addition to the train, which stopped service in the late 1960s, a historical theme park in downtown Williams is planned. The railroad and theme park are expected to pump $200 million annually into northern Arizona's economy.

Phoenix has landed an international **Formula One** road race through 1993. The race, held the past seven years in Detroit, will run through downtown streets the first week of June and is expected to bring between $7.5 million and $30 million to the local economy.

GOVERNMENT - Arizona is expected to lose 67 civilian and 783 military jobs due to the reduction and closure of military bases in the state. The planned reductions are part of several recommendations to cut military costs, made in a report by the Defense Secretary's Commission on Base Reassignments. The plan would cut 483 military and 23 civilian jobs at **Davis-Monthan** Air Force Base in Tucson; 300 military and 316 civilian positions at **Fort Huachuca** in Sierra Vista; and five civilian and 100 state jobs at the **Navajo Army Depot** near Flagstaff. The **Yuma Army Proving Ground**, however, would gain 200 civilian jobs from closure of a facility in Indiana.

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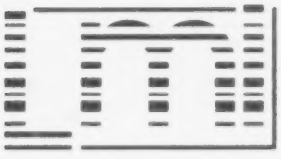

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 3
March 1989

Unemployment Rate

Seasonally Adjusted
January*

ARIZONA	5.8%
Maricopa County	4.8%
Pima County	4.8%
UNITED STATES	5.4%

Consumer Price Index

U.S. - January 1989
Base = 1982-84

Wage Earner/Clerical Worker	119.7
% Chg. Year Ago	4.5
All Urban	121.1
% Chg. Year Ago	4.7

Phoenix - 4th Qtr 1988
Base = 1982-84

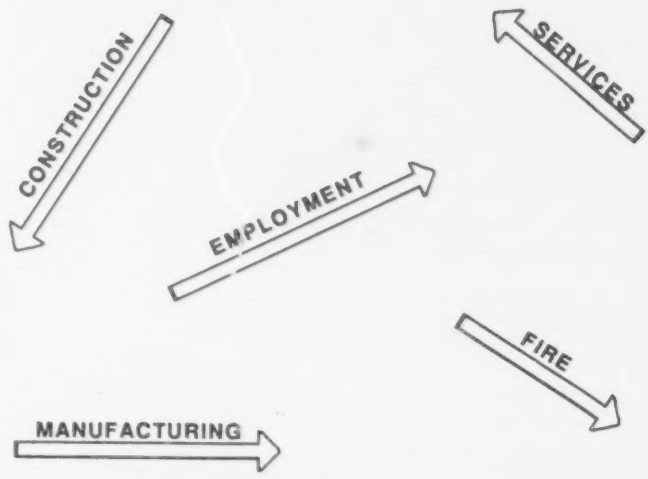
All Urban	122.5
% Chg. Year Ago	5.1

Tucson - 4th Qtr 1988
Base = 1982-84

All Urban	124.3
% Chg. Year Ago	3.2

* Preliminary

Annual Forecast



Another year has passed, and with it comes the task of reviewing Arizona's over-the-year economic performance and forecasting what lies in store for 1989 and beyond.

Department of Economic Security, Research Administration, which is charged with this responsibility, annually gauges the state's economic health by measuring two key variables -- number of employed and unemployed.

At the beginning of each year Research Administration updates its Arizona Employment Forecasting Model (AEFM) with revised (benchmarked) employment and unemployment data from the previous two

(Continued on page 5)

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Manufacturing, Construction, FIRE Responsible for State's Sluggish Economy in '88

When evaluating Arizona's economy in 1988, the first area to analyze is the state's unemployment rate, the most widely used measure of economic performance.

Revised figures reveal that Arizona's unemployment rate edged up slightly, from 6.2 percent in 1987 to 6.3 percent in 1988. The small increase in the rate -- which is nearly 1 percent higher than the national average of 5.5 percent -- was primarily due to the continued moderate growth in the state labor force and an anemic increase in wage and salary employment.

Arizona's labor force, however, grew 2.6 percent in 1988 compared to a U.S. increase of 1.5 percent. And total employment (wage and salary employment, plus self-employed, agricultural, unpaid family and household workers; all of whom must reside in Arizona) also increased 2.6 percent last year, but that was down from 1987's rate of 3.3 percent.

Arizona's wage and salary employment grew only 1.8 percent in 1988 compared to 3.6 percent for the nation. Sectors responsible for the flat performance were Manufacturing; Construction; and Finance, Insurance and Real Estate (FIRE).

Sectors that drove the economy primarily involved service-producing industries. These included Services; Trade; and Transportation, Communications, and Public Utilities (TCPU). Also, an overall improvement in Mining helped some of the rural counties to increase their employment base.

In 1988 employment in Manufacturing increased a meager 1.3 percent compared to a U.S. rate of 2.5 percent. Despite the increase in demand for U.S. goods in the global market -- as evidenced by an improvement in the national trade balance and higher employment -- the state did not benefit much from that growth. As a result, Arizona manufacturers did not increase their employment base. Figure 2 shows the growth rate in Manufacturing has been higher in Arizona than the United States since 1981, except for last year.

Construction continued to be the major cause of the state's weak performance. In 1988 construction employment fell 9 percent, continuing a downward trend that began in 1986 when employment increased a meager 0.9 percent, then fell 8.8 percent the following year. The decline in construction jobs was due to the continuation of an excess supply of industrial, retail and multifamily housing space. Figure 1 shows that the U.S. growth rate in construction employment has been higher than Arizona's rate since 1986.

Services, Trade continued strong

Along with Construction, FIRE lost jobs in 1988. Employment in this industry dropped 1.3 percent. On the plus side, Services added 15,900

(Continued on page 4)

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Figure 1

Arizona vs. United States
Construction Employment
Growth Rates (1981-1990)

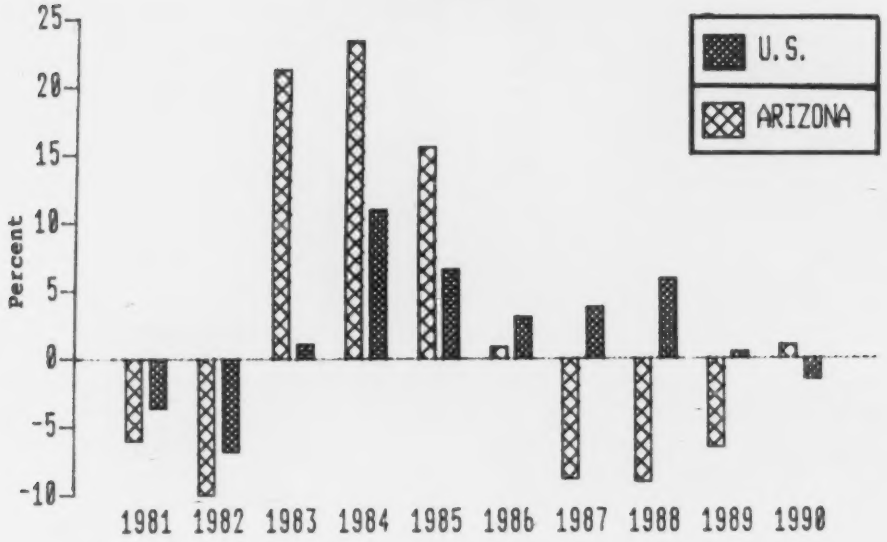
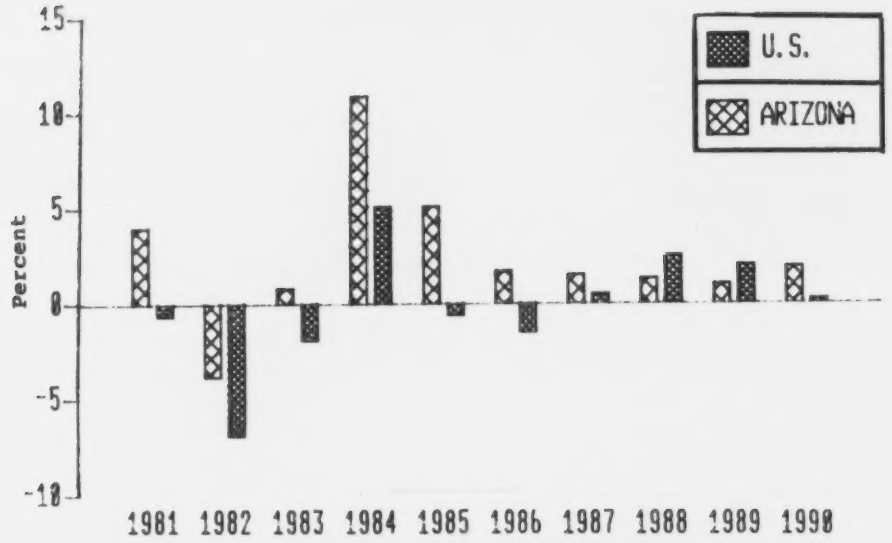


Figure 2

Arizona vs. United States
Manufacturing Employment
Growth Rates (1981-1990)



Sources: Arizona Department of Economic Security, Research Administration, and U.S. Bureau of Labor Statistics, February 1989.

Table 1

WAGE AND SALARY EMPLOYMENT GROWTH
(Annual Averages, In Thousands)

	Arizona			Maricopa County		
	1987	1988	Growth Rate	1987	1988	Growth Rate
Total Wage & Salary Employment	1,385.8	1,410.6	1.8%	913.8	931.3	1.9%
Manufacturing	187.4	189.9	1.3	135.7	138.3	1.9
Mining	11.4	12.0	5.3	0.6	0.7	16.7
Construction	103.2	93.9	-9.0	69.9	64.6	-7.6
TCPU*	71.7	72.7	1.4	49.1	50.3	2.4
Trade	340.3	347.5	2.1	231.5	235.7	1.8
FIRE**	94.5	93.3	-1.3	74.9	74.3	-0.8
Services	345.3	361.2	4.6	232.0	243.9	5.1
Government	232.0	240.3	3.6	120.0	123.6	3.0

	Pima County			Balance of State		
	1987	1988	Growth Rate	1987	1988	Growth Rate
Total Wage & Salary Employment	245.0	247.1	0.9%	227.0	232.2	2.3%
Manufacturing	31.0	30.4	-1.9	20.7	21.2	2.4
Mining	1.6	1.8	12.5	9.2	9.5	3.3
Construction	19.7	17.1	-13.2	13.6	12.2	-10.3
TCPU*	9.2	9.1	-1.1	13.4	13.3	-1.5
Trade	55.6	57.0	2.5	53.2	54.8	3.0
FIRE**	12.8	12.2	-4.7	6.8	6.8	0.0
Services	65.3	67.5	3.4	48.0	49.8	4.0
Government	49.8	51.9	4.2	62.2	64.8	4.2

* TCPU = Transportation, Communications, and Public Utilities
** FIRE = Finance, Insurance, and Real Estate

Note: Totals may not be exact due to rounding.

Source: Arizona Department of Economic Security, Research Administration, February 1989.

jobs, followed by Trade with 7,200 additional workers.

Also on the positive side, TCPU added 1,000 jobs, and employment in Mining expanded by 600. Lower job growth in TCPU was due to slower labor force growth, while improvement in Mining was due to increased efficiency and higher copper prices. These sectors should continue to expand at a fairly healthy rate in 1989 and 1990.

At the substate level, Nonmetropolitan Counties' employment grew 2.3 percent in 1988, followed by Maricopa County at 1.9 percent and Pima County at 0.9 percent. However, because of its size, Maricopa County contributed the largest number of jobs (17,500), followed by Nonmetropolitan Counties (5,200) and Pima County (2,100).

Overall, Arizona's economic activity in 1988 was sluggish. Service-producing sectors drove the economy, while goods-producing sectors -- such as Manufacturing -- performed modestly, and Construction continued in its correction phase, eliminating jobs.

--Jalal Ahmad

Key Variables Play Role in Forecasting Future Growth

Forecasting Arizona's economic future requires analysis of key variables that affect regional, national, and international economies: Gross National Product (GNP), interest rates, inflation, and value of the dollar.

Following is an overview of some key variables expected to influence Arizona's economy in 1989 and 1990.

Despite an increase in interest rates in the second half of 1988, U.S. GNP grew a higher-than-expected 3.8 percent last year, primarily because of continued consumer spending. GNP, however, should slow in the first two quarters of 1989.

The drop in GNP will be due to higher interest rates caused by the Federal Reserve Bank's tightening of the money supply, to slow consumer spending and inflation. Inflation, as measured by the Consumer Price Index (CPI), is expected to increase 5.1 percent in 1989 and 5.5 percent in 1990.

Short-term and long-term interest rates are expected to edge up in 1989, then drop slightly in 1990. Examples: short-term -- three-month Treasury bill is expected to increase to 8.3 percent in 1989, then decline to 7.7 percent in 1990; long-term -- 30-year mortgage rate is forecasted to rise to 10.3 percent in 1989, then slide to 9.8 percent in 1990.

Higher interest rates will negatively affect the demand for interest-sensitive goods and services. For instance, higher interest rates should lower demand for new housing, automobiles and consumer durables.

With higher interest rates, the value of the dollar may not fall or it could even become stronger in the near-term. However, fundamentals of trade theory suggest that in the long-run the dollar should fall until U.S. trade imbalances are significantly reduced. In 1989 the dollar is expected to fall 6 to 9 percent, then drop an additional 5 percent in 1990.

Finally, the price of oil is expected to stay firm or rise slightly in the first two quarters of 1989, then fall in the second half of 1989 and in 1990.

Based on these key variables no national recession is expected in the next two years. These assumptions, however, are modest and call for a slowdown in national economic growth in 1989 and 1990.

It's possible, however, that an unanticipated shock generated from the global market -- skyrocketing oil prices, crash in the U.S. dollar or other unanticipated events -- can easily lead the U.S. economy into slower-than-expected growth or even a recession in late 1989 or in 1990. Since Arizona is tied to the U.S. economy, the state should also slow or recede if a national recession takes place.

--Jalal Ahmad

Annual Forecast

(Continued from page 1)

years. Then economic assumptions and key variables about the expected performance of the national, regional and state economies (See "Key Variables Play Role in Forecasting Growth," above) are factored into the model's 250 equations to derive estimates of employment and unemployment for the current and following years.

Presented in the March issue are AEFM employment and unemployment predictions for 1989 and 1990, and analyses of the state as a whole and three substate regions -- Maricopa and Pima counties, and Nonmetropolitan Counties, also referred to as "Balance of State." Also in this issue is a review of 1988, plus numerous charts and tables, and data comparing the percentage increase in growth in Arizona vs. the United States.